D16 cont

circuit after the image is illuminated until display data for the next image from the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data.

D17

39. (Twice Amended) A docking system as in claim 35 further comprising a display subhousing, the display subhousing carrying the active matrix liquid crystal display, the light emitting diode and a lens that magnifies the image presented on the display, wherein the display subhousing can be moved from a storage position to an operating position.

D18

41. (Amended) A docking system as in claim 1, wherein the active matrix liquid crystal display includes an array of at least 75,000 pixel electrodes having a display area of less than 158 mm^2.

REMARKS

Claims 1-44 are pending in the application. All claims stand rejected. In response, certain claims have been amended to more distinctly claim the Applicants' invention. The rejections are also traversed. Reconsideration and further examination are requested.

Claim Rejection Under § 112, first paragraph

Claims 20, 29, and 44 have been rejected under 35 U.S.C. § 112, first paragraph.

Although not claimed, the Office Action states that the invention is limited to an array of at least 640 x 480 pixels. From that, the Office Action concludes that the invention cannot have an array of at least 320 x 240 pixels. The statement is, however, incorrect.

The specification, indeed, supports both arrays as alternatives. As the Office Action acknowledges, the specification discloses, at page 4, lines 28-29, the array of pixel electrodes can be at least "320 x 240, 640 x 480 or higher." Since the conjunction "or" is used to indicate alternatives in a series, the arrays of "320 x 240" and "640 x 480" pixels are clearly two alternative embodiments. Furthemore, the specification states at page 10, lines 5-12, that the

display can have a 320 x 240 array of pixels in some embodiments, and a 640 x 480 array of pixels in other embodiments.

Reconsideration of the rejection under 35 U.S.C. § 112, first paragraph is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-44 have been rejected under 35 U.S.C. § 103(a) based on UK 2,289,555 to Wilska et al. in view of US 5,436,635 to Takahara et al.

The Applicants' docking system, as recited in amended Claims 1, 21, 30, and 35, includes a matrix display, a power management circuit that controls the power consumption of a control circuit that actuates the pixel electrodes to present an image on the display, and a light source that illuminates the image. After the image has been illuminated, the power management circuit lowers the power consumption of the control circuit until display data for the next image is ready to be generated by the control circuit and written to the matrix display. Accordingly, the power management circuit lowers the power consumption of the control circuit between sequentially generated display data. By lowering the power consumption of the control circuit between the writing of images, the power management circuit has the advantageous feature of lengthening the lifetime of the batteries or energy source used to power the display.

Wilksa, alone or in combination with Takahara, does not teach or suggest a docking system with such features, in particular, a power management circuit that lowers the power consumption of the control circuit after the image is illuminated until display data for the next image from the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data, as required by amended Claims 1, 21, 30, and 35.

Wilska discusses, as illustrated in its Figures 1-3, a device for personal communication, data collection, and processing. The device includes a housing (1) which encloses a data

processing unit (2) that connects to a cellular telephone (17) with a mobile controller (8). The device also includes a display (9) mounted to the housing (1) for displaying images to a user of the device.

We agree with the Office Action that Takahara, unlike Wilska, discusses an active matrix liquid crystal display with a light source. Such a system is said to be usable as a view finder.

Neither Takahara nor Wilska, however, mention the claimed power management circuit that controls the power consumption of the control circuit, as recited in amended Claims 1, 21, 30, and 35. Furthermore, neither reference discusses lengthening the lifetime of an energy source used to power the display, which is a particular advantage of the Applicants' power management circuit. Without such an advantage, there is no motivation to include the Applicants' power management circuit in Wilska's nor Takahara's devices.

Without a power management circuit that lowers the power consumption of the control circuit after an image has been presented until display data for the next image from the control circuit is ready to be presented, Wilska's device, alone or in combination with the teachings of Takahara, cannot include the claimed display with a control circuit and power management circuit that lowers the power consumption of the control circuit between sequentially generated display data, as required by amended Claims 1, 21, 30, and 35.

Thus, Wilska, alone or in combination with Takahara, does not make obvious the invention described in amended Claims 1, 21, 30, and 35. The § 103(a) rejections are therefore overcome.

Because the other claims depend from Claims 1, 21, 30, or 35, the reasons for allowance of Claims 1, 21, 30, and 35 apply as well to the dependent claims.

Reconsideration of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

Regarding Double Patenting

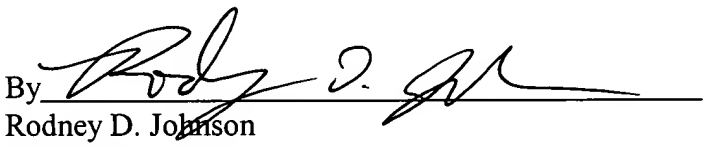
Claims 1-44 have been provisionally rejected under the judicially-created doctrine of double patenting based on Claims 1-28 of co-pending Application No. 08/766,607. The applicants wish to place this rejection in abeyance until the claims are finalized. A Terminal Disclaimer will be filed to obviate this rejection once the claims are otherwise allowable.

CONCLUSION

In view of the above amendments and remarks, it is believed that all pending claims (Claims 1-44) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 

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MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

1. (Amended Four Times) A docking system for a telephone comprising:

a hand held housing having a plurality of control elements and a connection port that electrically connects a control circuit within the housing to a wireless telephone that docks with the housing, the control circuit receiving image data from the telephone, and generating display data based on the image data;

an active matrix liquid crystal display mounted to the housing, the display receiving the display data from the control circuit, and presenting the display data as an image; [and]

a light source mounted within the hand held housing, the light source illuminating the image presented on [that illuminates] the display; and

a power management circuit that lowers the power consumption of the control circuit after the image is illuminated until display data for the next image from the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data.

2. (Amended) [The] A docking system [of] as in Claim 1 wherein the housing comprises a first display port and a second display port.

3. (Amended) [The] A docking system [of] as in Claim 2 wherein the matrix display can be mounted to the housing at the first port or the second port.

4. (Amended) [The] A docking system [of] as in Claim 1 wherein the matrix display further comprises an array of transistor circuits formed with single crystal silicon, the array of transistor circuits being bonded to an optically transmissive substrate with an adhesive layer.

5. (Twice Amended) [The] A docking system [of] as in Claim 1 further comprising a color sequential display circuit coupled to the matrix display and the control circuit.

6. (Thrice Amended) [The] A docking system [of] as in Claim 1 wherein the active matrix liquid crystal display is a color sequential display system and the light source includes an LED backlight.

7. (Amended) A docking system as in claim 1 further comprising a timing circuit connected to the active matrix liquid crystal display and coupled to the control circuit for controlling the sequential flow display data to the display.

8. (Amended) A docking system as in claim [6] 1 further comprising a battery carried by the housing.

9. (Twice Amended) A docking system as in claim [7] 1 wherein the light source includes an LED light source that is optically coupled to the display and further comprising a lens that magnifies [an] the image presented on the display.

17. (Twice Amended) A docking system as in claim [1] 9 further comprising a display subhousing module, the display subhousing module carrying the active matrix liquid crystal display, the light source, and [a] the lens, wherein the display subhousing is detachable from the housing.

20. (Amended) A docking system as in claim [19] 1 wherein the active matrix liquid crystal display has at least 640 x 480 pixel electrodes.

21. (Thrice Amended) A docking system for a telephone comprising:

a hand held housing having a plurality of control elements and a connection port that links a control circuit within the housing to a telephone attachable to the housing, the control

circuit receiving image data from the telephone, and generating display data based on the image data;

an active matrix liquid crystal display mounted to the housing and connected to the control circuit, the display receiving the display data from the control circuit, and presenting the display data as an image;

a light source mounted within the hand held housing, the light source illuminating the image presented on [that illuminates] the display; [and]

a battery in the housing that provides power to the display and the light source; and

a power management circuit that lowers the power consumption of the control circuit after the image is illuminated until display data for the next image from the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data.

24. (Twice Amended) A docking system [for a telephone] as in claim 21 wherein the control circuit mounted in the housing is a central processing unit.

25. (Thrice Amended) A docking system as in claim 21 further comprising a display subhousing, the display subhousing carrying the active matrix liquid crystal display, the light source, and a lens that magnifies the image presented on the display, wherein the display subhousing can be moved from a storage position to an operating position.

27. (Amended) A docking system as in claim 26 wherein the light source includes at least one light emitting diode (LED).

28. (Twice Amended) A docking system as in claim 27 wherein the active matrix liquid crystal display is a color sequential display system and the [light source is a] LED is a backlight.

29. (Amended) A docking system as in claim [28] 21 wherein the active matrix liquid crystal display has at least 640 x 480 pixel electrodes.

30. (Thrice Amended) A method of displaying an image on a docking system in conjunction with a wireless telephone, comprising:

linking an external port of the telephone with a connection port of a docking station of the docking system to dock the telephone with the docking station and to provide a communication link between the telephone and the docking station[, the telephone having a transceiver capable of receiving audio and image data]; and

operating a display control circuit of the docking station, the control circuit being connected to [the transceiver and] an active matrix liquid display of the docking station, the control circuit receiving image data from the telephone through the communication link, and generating display data based on the image data, [through the communication link, the operating generating an image on the display] the image data being presented on the display as an image;

illuminating the image presented on the display; and

operating a power management circuit that lowers the power consumption of the control circuit after the image is illuminated until display data for the next image form the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data.

35. (Thrice Amended) A docking system for a telephone comprising:

a hand held housing having a plurality of control elements and a connection port that links a color sequential display control circuit within the housing to a telephone attachable to the housing, the control circuit receiving image data from the telephone, and generating display data based on the image data;

an active matrix liquid crystal display mounted to the housing and connected to the control circuit, the display receiving the display data from the control circuit, and presenting the display data as an image;

a light emitting diode mounted within the hand held housing, the light emitting diode illuminating the image presented on [that illuminates] the display; [and]

a battery in the housing that provides power to the display and the light emitting diode; and

a power management circuit that lowers the power consumption of the control circuit after the image is illuminated until display data for the next image from the control circuit is ready to be presented to the matrix display, the power consumption of the control circuit being lowered between sequentially generated display data.

39. (Twice Amended) A docking system as in claim 35 further comprising a display subhousing, the display subhousing carrying the active matrix liquid crystal display, the light emitting diode and a lens that magnifies the image presented on the display, wherein the display subhousing can be moved from a storage position to an operating position.

41. (Amended) [The] A docking system [of] as in claim 1, wherein the active matrix liquid crystal display includes an array of at least 75,000 pixel electrodes having a display area of less than 158 mm^2.